

Application No.: 10/091,080

Case No.: 57080US002

AMENDMENT TO THE CLAIMS

The following listing of claims will replace all prior versions of claims in the application:

1. (currently amended) An abrasive article comprising
a backing having a major surface; and
an abrasive coating on the major surface of the backing comprising at least 20% by weight of a superabrasive particle, wherein the abrasive coating is derived from an abrasive slurry comprising
superabrasive particles;
a continuous phase comprising a reactive curing binder precursor; and
a dispersant comprising a polymer having a molecular weight (Mw) of greater than 500 and an AV of greater than 4.5.
2. (original) The abrasive article of claim 1 wherein the abrasive coating is derived from an abrasive slurry comprising a dispersant comprising a polymer having a molecular weight (Mw) of greater than 1000.
3. (original) The abrasive article of claim 1 wherein the abrasive coating is derived from an abrasive slurry comprising a dispersant comprising a polymer having a molecular weight (Mw) of between about 3000 and about 4000.
4. (original) The abrasive article of claim 3 wherein the abrasive coating is derived from an abrasive slurry comprising a dispersant comprising a polymer having an AV of between about 5 and about 7.5.
5. (original) The abrasive article of claim 1 wherein the abrasive coating is derived from an abrasive slurry comprising a dispersant comprising a polymer having a molecular weight (Mw) of between about 8000 and about 9000.

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6. (original) The abrasive article of claim 5 wherein the abrasive coating is derived from an abrasive slurry comprising a dispersant comprising a polymer having an AV of between about 12 and about 13.
7. (original) The abrasive article of claim 1 wherein the abrasive coating comprises at least about 30% by weight of a superabrasive particle.
8. (original) The abrasive article of claim 7 wherein the abrasive coating comprises between about 30% by weight and about 80% by weight of a superabrasive particle.
9. (canceled)
10. (currently amended) The abrasive article of claim 1 ~~[[9]]~~ wherein the abrasive coating comprises a binder.
11. (original) The abrasive article of claim 1 wherein the superabrasive particle is diamond.
12. (original) The abrasive article of claim 11 wherein the diamond has a particle size less than 2 micrometers.
13. (currently amended) An abrasive article comprising
a backing having a major surface; and
an abrasive coating on the major surface of the backing comprising at least 20% by weight of a superabrasive particle, wherein the abrasive coating is derived from an abrasive slurry comprising
superabrasive particles;
a continuous phase comprising a reactive curing binder precursor ; and
a dispersant comprising a polymer having a molecular weight (Mw) of greater than 10,000 and an AV of greater than 1.0.

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14. (currently amended) An abrasive article comprising
a backing having a major surface; and
an abrasive coating on the major surface of the backing comprising at least 20% by weight of a superabrasive particle, wherein the abrasive coating is derived from an abrasive slurry comprising
superabrasive particles;
a continuous phase comprising a reactive curing binder precursor; and
a dispersant comprising a polymer having a molecular weight (Mw) of greater than 100,000 and an AV of greater than 0.
15. (original) The abrasive article of claim 14 wherein the abrasive coating is derived from an abrasive slurry comprising a dispersant comprising a polymer having a molecular weight (Mw) of greater than 150,000.
16. (currently amended) An abrasive article comprising
a backing having a major surface; and
an abrasive coating on the major surface of the backing comprising at least 20% by weight of a superabrasive particle, wherein the abrasive coating is derived from an abrasive slurry comprising
superabrasive particles;
a continuous phase comprising a reactive curing binder precursor; and
a dispersant comprising a polymer having a molecular weight (Mw) of greater than 500 and a measurable total Amine Value.
17. (currently amended) A method of manufacturing an abrasive article comprising coating an abrasive slurry comprising superabrasive particles, a continuous phase comprising a reactive curing binder precursor, and a dispersant comprising a polymer having an average molecular weight (Mw) of greater than 500 and an AV of greater than 4.5 onto a backing, wherein the superabrasive particles comprise at least 20% dry weight of all solids in the slurry; and

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solidifying the abrasive slurry.

18. (original) The method of claim 17 wherein the abrasive slurry is cured.
- 19 (currently amended) An abrasive article comprising
a backing having a major surface; and
an abrasive coating on the major surface of the backing comprising at least 20% by
weight of a superabrasive particle, wherein the abrasive coating comprises
superabrasive particles;
a continuous phase comprising a reactive curing binder precursor; and
a dispersant comprising a polymer having a molecular weight (Mw) of greater
than 500 and an AV of greater than 4.5.